Problem Solution Fit

Define CS, fit into CC

1. CUSTOMER SEGMENT(S) — CS

Who is your customer?
i.e. working parents of 0-5 y.o. kids

The main customers for our project are:

- Private Swimming Pool Owners
- Home Owners who own a Swimming Pool
- Life-Guards hired at the Swimming Pool

6. CUSTOMER CONSTRAINTS — CC

What constraints prevent your customers from taking action or limit their choices of solutions? i.e. spending power, budget, no cash, network connection, available devices.

- Customers could be skeptical about the accuracy of the detection.
- They can harbor security concerns.

5. AVAILABLE SOLUTIONS — AS

Which solutions are available to the customers when they face the problem or need to get the job done? What have they tried in the past? What pros & cons do these solutions have? i.e. pen and paper is an alternative to digital notetaking

Prediction process takes place only after drowning but proposed solution uses Deep Learning Algorithm for detection so that there is a chance for detecting drowning accident at earlier stage (i.e., model could also detect partially drowned subjects).

Pros: Detect before the subject has completely drowned.
Cons: If the video feed is broken or obstructed it does not give a result.

Explore AS, differentiate

Focus on J&P, tap into BE, understand RC

2. JOBS-TO-BE-DONE / PROBLEMS — J&P

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

- Detect potential drowning subjects in the Swimming Pool.
- Alert life-guards when a subject is drowning.

9. PROBLEM ROOT CAUSE — RC

What is the real reason that this problem exists?
What is the back story behind the need to do this job?
i.e. customers have to do it because of the change in regulations.

- Life-guard is alerted only when a person has partially/completely drowned.
- Cannot save the person until they have partially drowned.

7. BEHAVIOUR — BE

What does your customer do to address the problem and get the job done?
i.e. directly related: find the right solar panel installer, calculate usage and benefits; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

- Saving people's life.
- Taking effective action in case of an emergency.
- Being attentive and quick in responding to emergencies.

Focus on J&P, tap into BE, understand RC

Identify strong TR & EM

3. TRIGGERS — TR

What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a new law passed, ...

Potential subject drowning match in the video frame based on the sample images the model is trained on

4. EMOTIONS: BEFORE / AFTER — EM

How do customers feel when they face a problem or a job and afterwards?
i.e. lost, insecure > confident, in control - use it in your communication strategy & design.

Before: Subject being anxious about their safety in swimming pool.

After: With the device planted, the subject would feel safer as it would alert life-guards in case of an active drowning.

10. YOUR SOLUTION — SL

If you are working on an existing business, write down your current solution first, fill in the canvas, and check how much it fits reality.
If you are working on a new business proposition, then keep it blank until you fill in the canvas and come up with a solution that fits within customer limitations, solves a problem and matches customer behaviour.

The model uses advanced YOLO v5 Algorithm to detect potential drowning subjects which yields higher accuracy and performance compared to existing solutions.

Upon a positive detection an alert would be sent to the Web Application.

8. CHANNELS of BEHAVIOUR — CH

8.1 ONLINE
What kind of actions do customers take online? Extract online channels from #7

Monitoring active swimmers via Web Application.

8.2 OFFLINE
What kind of actions do customers take offline? Extract offline channels from #7 and use them for customer development.

Be on the look for potential drowning and responding to emergencies.

Extract online & offline CH of BE

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